

ABSTRACTIMAGE PROCESSING APPARATUS

In a processing system, video images of moving objects
5 are processed to model the objects in a 3D computer
model. Video from multiple cameras is processed to
separate objects from their shadows, and to test whether
an object is made up of separate objects, which are then
modelled separately. Each object is modelled using
10 vertical planes whose bases approximate the object's
ground footprint, using planes based on object surface
planes identified in the image data, or using a single
vertical plane. Pixel data from the video images is
rendered onto the planes in the models. The video for
15 rendering is selected based on the viewer's viewing
direction, the camera viewing directions, and quality
characteristics of the cameras and image data. If the
viewer's viewing direction is close to vertical or a
plane of an object, a schematic of the objects' positions
20 is displayed. To account for image data from different
cameras being used, successive images are tested for
visual discontinuous, and are modified if necessary.
Information indicating the accuracy/reliability of the
rendered image is displayed.

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(FIGURE 3)